

# **Title : Understanding Risk Management in Renewable Energy Projects**

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## *Abstract*

For decades Renewable Energy has been playing a vital role in the transformation towards energy efficient technologies and low carbon economies. According to data from the United Nations Environment Program (UNEP) and Bloomberg New Energy Finance, investment in renewable energy projects is now surpassing investment in new fossil fuel-powered generation capacity. The data shows that global investment in RE (Renewable Energy) in 2010 was increased by 32 % to a record 211 billion US dollar from a revised 160 billion in 2009. With such development , Risk management is a key building block of any commercial investment in energy projects . Risk management instruments in RE projects can take in the form of insurance and reinsurance, contracts, alternative risk transfer instruments, and credit enhancement products. These and other financial tools are an indispensable part of well-established markets. Risk management is a critical element in securing project financing in RE sector. Due to the increase in investments in renewable energy, political, regulatory and financial risk are increasingly becoming severe as macroeconomic condition for many countries has also deteriorates further with time. To add, weather-related volume risk is also stands as acute as investments in wind farms continue to soar. Nevertheless, the risk management resources, traditional risk transfer tools and specialized risk transfer products available to the renewable energy sector linger at the edge, whereas in some respects it is very limited. This raises the need to understand Risk management issues in Renewable Energy Projects. The bottom line is to understand Risk management from its definition from Project management body of knowledge and its importance in projects specially in Renewable Energy sector where it has becoming importance over the last couple of years. The paper explains what risk mitigation strategies and what financial risk management instruments are available to cope with RE risks. In addition, the paper also discussed how risks are managed and dealt with in renewable energy sector.

***Keywords:*** Risk Management, Renewable Energy, Project Finance, Project Management